

REMARKS

Claims 18-44 are currently pending in the present application.

Claims 18-22, 24-25 and 37-41 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 3,938,266 to Cook ("Cook").

Rejections under 35 U.S.C. § 103(a) include:

Claims 26, 28 and 34-35 as unpatentable over Cook in view of U.S. Patent No. 4,882,399 to Tesoro, *et al.* ("Tesoro");

Claim 29 as unpatentable over Cook and Tesoro in further view of U.S.

Patent No. 4,938,900 to Moriwaki, *et al.* ("Moriwaki");

Claims 27 and 30 as unpatentable over Cook in view of U.S. Patent No.

5,560,934 to Afzali-Ardakani, *et al.* ("Afzali-Ardakani");

Claim 31 as unpatentable over Cook and Afzali-Ardakani in further view of Moriwaki;

Claims 23, 26-28, 30 and 32-33 as unpatentable over Cook in view of

Admitted Prior Art (citing the specification at 3:40-4:7);

Claims 34-36 as unpatentable over Cook and Tesoro in further view of

U.S. Patent No. 6,329,473 to Marten, *et al.* ("Marten");

Claims 42 and 44 as unpatentable over Cook in view of U.S. Patent No.

4,125,522 to Becker ("Becker"); and

Claims 43-44 as unpatentable over Cook in view of German patent

document DE 92 16 278.9 ("DE 92 16 278.9").

Response to the Pending Rejections:

All of the pending rejections are based on the teachings of the Cook reference. For the following reasons, the Applicants respectfully submit that

Cook does not disclose or suggest all of the features of the present invention for which it is cited. The Applicants therefore respectfully traverse all the pending rejections.

The Cook reference is cited for disclosing “an adhesive system whose bond may be selectively destroyed or weakened by chemical action.” November 5, 2003 Office Action at 2. It is further asserted that Cook discloses “destroying an adhesive bond by releasing solvent into the adhesive, said solvent by chemical action, breaks the bond of the adhesive material.” *Id.* Close review of Cook, however, reveals that these assertions reflect an incomplete statement of Cook’s teachings, and fails to appreciate novel aspects of the present invention.

The presently pending claims are directed to a reversible adhesive system comprising a polymeric adhesive component and an additional chemical component (“a functional group”), whereby the *adhesive* may be broken down when the functional group is activated by introduction of energy. Specifically, claim 18 recites an additional component “comprising at least one functional group that can be activated by introduction of energy, such that a *chemical* reaction with the adhesive component takes place *resulting in at least partial breakdown of the adhesive component*”). In other words, the adhesive is broken down when the functional group receives energy, and the functional group *chemically* reacts with adhesive’s internal bonds to at least partially decompose the adhesive *itself*.

In contrast, the Cook approach teaches weakening of the *physical* bonds *between the adhesive and the shoe components (i.e., intermolecular bonds)*, not the weakening of the *chemical* bonds within the *adhesive* itself (*i.e.,*

intramolecular bonds). Cook teaches the inclusion of a separate, non-reactive component (metal particles) to receive energy, and then transferring heat from the metal particles to the adhesive or to a solvent to weaken the bonds between the adhesive and the shoe components. *See, e.g.*, Cook at 1:41-44 (describing breakdown of the adhesive bond from heat from the metal particles, *i.e.*, without a chemical reaction with the metal particles or any other additional component, as recited in claim 18: “[d]ispersed throughout the adhesive material are a plurality of energy absorbing elements whose heat is used to weaken the adhesive *characteristics* of the adhesive material”). These portions of Cook teach nothing with regard to altering the *chemical* structure of the adhesive molecules.

Even when Cook refers to use of a solvent as an additional component, one of ordinary skill in the chemical arts would recognize that the solvent is not used to alter the *chemical* composition of the adhesive, but instead only weakens the bonds between the adhesive and material to which it is bonded.

It is well known that in solvent solutions, the solvent interferes with dissolved component's intermolecular bonds, but does not alter the chemical bonds within dissolved component itself. Indeed, adhesives are frequently applied in a solvent solution, and become adhesive as the solvent evaporates and no longer interferes with intermolecular bonds. Accordingly, Cook's release of adhesive merely reintroduces a substance which weakens the *physical* (intermolecular) bonds between the adhesive and the shoe, rather than altering the chemical composition of the adhesive itself. Cook therefore does not disclose or suggest the present invention's introduction of an additional component having a functional group which *chemically* breaks down the adhesive itself, as

recited in claim 18 (*i.e.*, “such that a *chemical* reaction with the adhesive component takes place resulting in at least partial breakdown of *the adhesive component*”).

Because the Cook reference does not disclose or suggest a reversible adhesive system comprising an additional component with a functional group which chemically reacts with the adhesive when activated by energy delivered from an outside source, the Applicants respectfully request the pending § 102(b) rejection of independent claims 18 and 37 and their dependent claims 19-22, 24-25 and 38-41 be withdrawn.

Remaining § 103(a) Rejections: Regarding the remaining rejections, the Applicants note that none of the other cited references teaches or suggests the novel features of the present invention not taught by Cook. Because all the pending § 103(a) rejections are based on the Cook reference, no combination of Cook and Tesoro, Moriwaki, Afzali-Ardakani, Marten, Becker, DE 92 16 278.9 and/or “Admitted Prior Art” teaches or suggests all the features of the present invention as recited in claims 23, 26-33, 36 and 42-44, which depend from allowable independent claims 18 or 37. Accordingly, the Applicants respectfully request the pending § 103(a) rejections be reconsidered and withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, the Applicants submit claims 18-44 are in condition for allowance. Early and favorable consideration and issuance of a Notice of Allowance for these claims is respectfully requested.

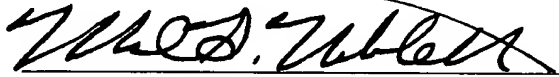
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this

should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #225/49578US).

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